WE CLAIM:

1. A method for producing a bipolar separator plate for a polymer electrolyte membrane fuel cell comprising the steps of:

forming a powder mixture comprising at least one graphite component and at least one resin;

placing said powder mixture into a plate mold;

compressing said powder mixture at substantially ambient temperature, resulting in formation of a cold-pressed plate; and

heating said cold-pressed plate to a temperature suitable for curing said cold-pressed plate, resulting in formation of said bipolar separator plate.

2. A method in accordance with Claim 1, wherein said powder mixture is pressed at a pressure of at least about 500 psi.

3. A method in accordance with Claim 1, wherein said cold-pressed plate is heated to a temperature suitable for curing said cold-pressed plate.

4. A method in accordance with Claim 1, wherein said powder mixture comprises in a range of about 70% to about 99% by weight graphite.

5. A method in accordance with Claim 4, wherein said powder mixture comprises in a range of about 90% to about 99% by weight graphite.

6. A method in accordance with Claim 1, wherein said graphite comprises graphite particles having a particle size in a range of about 2 microns to about 200 microns.

7. A method in accordance with Claim 6, wherein said graphite particles have a mean particle size in a range of about 30 microns to about 40 microns.

8. A method in accordance with Claim 1, wherein said powder mixture comprises fewer than five forms of graphite.

9. In a polymer electrolyte membrane fuel cell stack comprising a plurality of fuel cell units comprising an anode, a cathode, and a polymer electrolyte membrane disposed between said anode and said cathode, and a bipolar separator plate disposed between said anode of one said fuel cell unit and said cathode of an adjacent said fuel cell unit, the improvement comprising:

said bipolar separator plate having a graphite composition comprising in a range of one to four graphite components and at least one resin in a ratio of graphite to resin in a range of about 70:30 to about 99:1.

10. A polymer electrolyte membrane fuel cell stack in accordance with Claim 9, wherein said ratio of graphite to resin is in a range of about 90:10 to about 99:1.

11. A polymer electrolyte membrane fuel cell stack in accordance with Claim 9, wherein said graphite composition comprises graphite particles having a particle size in a range of about 2 microns to about 200 microns.

12. A polymer electrolyte membrane fuel cell stack in accordance with Claim 9, wherein said bipolar separator plate is produced by cold pressing a powder mixture of said graphite and said resin, forming a cold-pressed mixture, and heating said cold-pressed mixture to a temperature suitable for curing said cold-pressed mixture.

13. A method for producing a graphite article comprising the steps of:

forming a powder mixture comprising at least one graphite component and at least one resin;

placing said powder mixture into a mold;

compressing said powder mixture at substantially ambient temperature, resulting in formation of a cold-pressed article; and

heating said cold-pressed article to a temperature suitable for curing said cold-pressed article, resulting in formation of said graphite article.

14. A method in accordance with Claim 13, wherein said powder mixture comprises in a range of about 70% to about 99% by weight graphite.

15. A method in accordance with Claim 14, wherein said powder mixture comprises in a range of about 90% to about 99% by weight graphite.

16. A method in accordance with Claim 13, wherein said at least one graphite component comprises graphite particles having a particle size in a range of about 2 microns to about 200 microns.

17. A method in accordance with Claim 16, wherein said graphite particles have a mean particle size in a range of about 30 microns to about 40 microns.

18. A method in accordance with Claim 13, wherein said powder mixture comprises fewer than five forms of graphite.